Devin Krah
Continental Mirrored Graphics, Inc.
503 Bloomingdale
Bristol, Indiana 46507

Re: Registration
039-13724-00481

Dear Mr. Krah:

The renewal application from Continental Mirrored Graphics, Inc. (CMG), received on December 29, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following mirror printing operation located at 503 Bloomingdale, Bristol, Indiana 46507 is classified as registered:

(a) Three (3) printing presses (PPI to PP3) emitted through stacks E1 and E2.

(b) Six (6) natural gas-fired radiant heaters (H1 to H6) rated at 0.10 MMBtu/hr (each) emitted through stacks H1 to H6.

(c) Two (2) natural gas-fired process ovens (H7 and H8) rated at 0.15 MMBtu/hr (each) emitted through stacks H7 and H8.

The following conditions shall be applicable:

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

Pursuant to 039-9269-00481, the records of the ink usage and the volatile organic solvent content shall be kept for a minimum of 36 months and made available upon request of the Office of Air Quality (OAQ).

Pursuant to 326 IAC 2-6 (Emission Reporting) this source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year of VOC. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

Pursuant to 326 IAC 6-3-2 (Process Operations) the particulate matter (PM) from the surface coating operation shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

This registration is a registration renewal issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original signed by

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ERG/RB

cc: File - Elkhart County
Elkhart Health Department
Air Compliance - Greg Winstrom
Northern Regional Office
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

Company Name:	**Continental Mirrored Graphics, Inc. (CMG)**
Address:	**503 Bloomingdale**
City:	**Bristol, Indiana 46507**
Authorized individual:	**Devin Krah**
Phone #:	**(219) 848-4988**
Registration #:	**039-13724-00481**

I hereby certify that Continental Mirrored Graphics, Inc. (CMG) is still in operation and is in compliance with the requirements of Registration 039-13724-00481.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Registration Renewal

Source Background and Description

Source Name:	Continental Mirrored Graphics, Inc.
Source Location:	503 Bloomingdale, Bristol, Indiana 46507
County:	Elkhart
SIC Code:	2759
Operation Permit No.:	039-13724-00481
Permit Reviewer:	ERG/RB

The Office of Air Quality (OAQ) has reviewed an application from Continental Mirrored Graphics, Inc. (CMG) relating to the renewal of a registration for mirror printing operation.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Three (3) printing presses (PPI to PP3) emitted through stacks E1 and E2.

(b) Six (6) natural gas-fired radiant heaters (H1 to H6) rated at 0.10 MMBtu/hr (each) emitted through stacks H1 to H6.

(c) Two (2) natural gas-fired process ovens (H7 and H8) rated at 0.15 MMBtu/hr (each) emitted through stacks H7 and H8.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted units operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

There are no new emissions units or pollution control equipment which require prior approval.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) Registration 039-9269-00481 issued on February 23, 1998.

All conditions from previous approvals were incorporated into this permit.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
H1 - H6	Radiant Heaters	28	0.5	500	225
H7 - H8	Process drying ovens	12	1.33	500	225
E1 - E2	Surface coating	12	1.33	500	125

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Registration Renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 29, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix 1-4).

Potential To Emit Prior to Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	0.12
PM-10	0.12
SO_2	0.00
VOC	20.06
CO	0.33
NO_x	0.00
Single HAP	5.96
TOTAL HAPS	15.46

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants is less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(c) The potential to emit (as defined in 326 IAC 2-7-1 (29)) of at least one criteria pollutant is less than twenty five (25) tons per year and greater than or equal to five (5) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Maintenance
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Elkhart County has been classified as attainment or unclassifiable for all other criterial pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) Each criteria pollutant is less than 100 tons per year,

(b) A single hazardous air pollutant (HAP) is less than 10 tons per year, and

(c) Any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source.

Federal Rule Applicability

(a) The printing presses are not subject to the requirements of the New Source Performance Standards (NSPS)(326 IAC 12, (40 CFR 63.820, Subpart QQ) because Subpart QQ applies only to publication rotogravure printing presses and does not address the presses used at CMG. No other NSPS (326 IAC 12 and 40 CFR Part 60) are applicable to this source.

(b) The printing presses are not subject to the requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP), 326 IAC 14, (40 CFR 63.430, Subpart KK) because Subpart KK applies only to publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses and does not address printing

presses used at CMG. No other NESHAPs (326 IAC 14 and 40 CFR Part 63) are applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year of VOC. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

This source does not have potential HAP emissions equal to or greater than ten (10) tons per year, therefore this source is not subject to the provisions of 326 IAC 2-4.1.

326 IAC 8-1-6 (New Facilities - General Reduction Requirement)

This source does not have potential VOC emissions greater than twenty five (25) tons per year, therefore this source is not subject to the provisions of 326 IAC 8-1-6.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the surface coating operation shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Conclusion

The registration renewal of this mirror printing operation shall be subject to the conditions of the attached proposed Registration Renewal 039-13724-00481.

Appendix A: Emissions Calculations - Summary

Company Name: **CMG, Inc.**
Address City IN Zip: **503 Bloomingdale, Bristol, Indiana 46507**
CP: **039-13724**
Plt ID: **039-00481**
Reviewer: ERG/RB
Date: January 19, 2001

Uncontrolled Potential Emissions (tons/yr)

Process	PM*	PM10*	SO2	NOx	VOC	CO
Combustion	0.025	0.025	0.00	0.00	0.02	0.28
Surface Coating	0.09	0.09			20.04	
Total	**0.12**	**0.12**	**0.00**	**0.00**	**20.06**	**0.28**

Uncontrolled Potential Emissions (lbs/hr)

Process	PM*	PM10*	SO2	NOx	VOC	CO
Combustion	0.01	0.01	0.00	0.00	0.00	0.06
Surface Coating	0.02	0.02	0.00	0.00	4.58	0.00
Total	**0.03**	**0.03**	**0.00**	**0.00**	**4.58**	**0.06**

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: **CMG, Inc.**
Address City IN Zip: **503 Bloomingdale, Bristol, Indiana 46507**
CP: **039-13724**
Plt ID: **039-00481**
Reviewer: ERG/RB
Date: January 19, 2001

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.8	6.6

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	0.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.025	0.025	0.002	0.000	0.018	0.276

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name: **CMG, Inc.**
Address City IN Zip: **503 Bloomingdale, Bristol, Indiana 46507**
CP: **039-13724**
Plt ID: **039-00481**
Reviewer: ERG/RB
Date: January 19, 2001

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	6.899E-06	3.942E-06	2.464E-04	5.913E-03	1.117E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.643E-06	3.614E-06	4.599E-06	1.248E-06	6.899E-06

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: **CMG, Inc.**
Address City IN Zip: **503 Bloomingdale, Bristol, Indiana 46507**
CP: **039-13724**
Plt ID: **039-00481**
Reviewer: ERG/RB
Date: January 19, 2001

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Coating Material 1 cc-004	8.5	47.31%	0.0%	47.3%	0.0%	51.30%	0.00034	488.281	4.04	4.04	0.66	15.91	2.90	0.03	7.88	99%
Coating Material 1 cc-006	8.9	41.12%	0.0%	41.1%	0.0%	60.90%	0.00024	488.281	3.66	3.66	0.43	10.42	1.90	0.03	6.01	99%
Coating Material 2 ep34155	9.0	52.70%	0.6%	52.1%	0.6%	38.50%	0.00034	488.281	4.72	4.69	0.77	18.47	3.37	0.03	12.18	99%
Adhesive Apollo 2050	8.8	100.00%	0.1%	99.9%	0.1%	100.00%	0.02717	0.230	8.83	8.82	0.06	1.32	0.24	0.00	8.82	99%
Adhesive Apollo 6001	6.0	100.00%	4.9%	95.1%	3.5%	0.99%	0.00117	0.230	5.87	5.67	0.00	0.04	0.01	0.00	572.52	99%
Thinner butyl cellusolve	7.5	100.00%	0.0%	100.0%	0.0%	0.00%	0.00011	488.281	7.50	7.50	0.40	9.67	1.76	0.00	ERR	99%
Cleaner pure lacquer thinner	7.0	99.80%	0.2%	99.6%	0.2%	99.83%	0.00066	488.281	6.99	6.98	2.25	54.00	9.86	0.00	6.99	99%
State Potential Emissions			**Add worst case coating to all solvents**								**4.58**	**109.83**	**20.04**	**0.09**		

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used